

Docket No.: 123029-1057 (UHID 2003-031)

Patent

In The United States Patent And Trademark Office

In re Application of: Xiaolian Gao et al.

Serial No.: 10/553,328

Filing Date: Unassigned

Priority Date: April 14, 2003

Examiner: Unknown

Group No.: 1623

Confirmation No.: Not Assigned

For: Novel Reagent Compounds and Methods of Making and Using the Same

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Information Disclosure Statement

As listed on the accompanying forms PTO/SB/08A&B, applicant submits copies of the indicated references, which applicant believes may be material to the examination of the above-identified application, and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made, an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists. Further, the filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Written notification that the enclosed references have been considered in their entirety by return of a copy of the enclosed form, completed by the Examiner, is respectfully requested.

Statement For Information Disclosure Statement 37 CFR 1.97(E)
(Only if Required Above)

I, the person signing below hereby state that:

- ☐ each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. 37 CFR § 1.97(e)(1); or
- ☐ no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in the counterpart foreign application, and, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement. 37 CFR § 1.97(e)(2).

Translations of Foreign Documents

This Information Disclosure Statement includes no patents that are written in Non-English languages.

Fee Payment

- ☐ attached is a check in the amount of \$N/A
- ☐ charge Deposit Account No. 07-0153
in the amount \$

Applicants believe that no additional fees are due for the filing of this IDS. However, if any additional fees are due, or any overpayments have been made, please charge, or credit, Deposit Account No. 07-0153.

**Identification Of Time Of Filing The
Information Disclosure Statement**

- ☐ This Information Disclosure Statement is being filed within three months of the filing date of the national application.
- ☐ This Information Disclosure Statement is being filed within three months of the date of entry of the national stage as set forth in §1.491 in an international application.
- ☒ This Information Disclosure Statement is being filed before the mailing date of the First Office Action on the merits.
- ☐ This Information Disclosure Statement is being filed after three months of the filing date of the national application or after three months of the date of entry of the national stage as set forth in § 1.491 in an international application or after the mailing date of the first Office Action on the merits, but before the mailing date of either a final action under § 1.113 or a notice of allowance under § 1.311, or an action that otherwise closes prosecution in the application.

Accompanying this transmittal is:

- ☐ statement specified in 37 CFR § 1.97(e); or
- ☐ a fee set forth in 37 CFR § 1.17(p)
- ☐ This Information Disclosure Statement is being filed after the mailing date of a final action under § 1.113, or a notice of allowance under § 1.311 but before the payment of the issue fee.

Accompanying this transmittal is:

1. a statement as specified in 37 CFR § 1.97(e); and
2. a fee set forth in 37 CFR § 1.17(p)

Docket No.: 123029-1057 (UHID 2003-031)

Patent

Dated: 4-12-06


Tim Headley

Attorney for Applicant

Registration No.: 31,765

Customer No. 37058

Gardere Wynne Sewell LLP

IP Section

1601 Elm Street, Suite 3000

Dallas, Texas 75201

Phone: (713) 276-5320

Fax: ((214) 999-3623

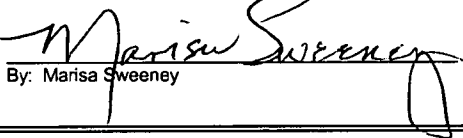
theadley@gardere.com

CERTIFICATE OF MAILING

Express Mail No.: EV 465741784 US

Date of Deposit: April 12, 2006

I certify that the accompanying paper is being deposited with the United States Postal Service and sent "Via Express Mail" service under 37 CFR 1.08 on the date indicated above and is addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


By: Marisa Sweeney

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> Sheet <u>1</u> of <u>5</u>	Complete If Known	
	Application Number	10/553,328
	Filing Date	Unknown
	First Named Inventor	Xiaolian Gao
	Art Unit	1623
	Examiner Name	
	Attorney Docket Number	123029-1057 (UHID 2003-031)

U. S. PATENT DOCUMENTS					
Examiner Initial	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	1.	6,107,479	08/22/2000	Natt et al.	
	2.	5,843,655	12/01/1998	McGall	

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner Initial	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Country or Patent Office	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code*Number*Kind Code ⁵ (if known)				

Examiner Signature	/Patrick Lewis/ (10/13/2009)	Date Considered	
--------------------	------------------------------	-----------------	--

EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/13/2009)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> Sheet <u>2</u> of <u>5</u>	Complete If Known	
	Application Number	10/553,328
	Filing Date	Unknown
	First Named Inventor	Xiaolian Gao
	Art Unit	1623
	Examiner Name	
	Attorney Docket Number	123029-1057 (UHID 2003-031)

NON PATENT LITERATURE DOCUMENTS			T ²
Examiner Initial*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
	3.	WASSERMAN, S.R., et al. Structure and reactivity of alkylsiloxane monolayers formed by reaction of alkyltrichlorosilanes on silicon substrates. <i>Langmuir</i> , 5, (1989) 1074-1087	
	4.	BALACHANDER, N. et al. Monolayer Transformation by Nucleophilic Substitution: Applications to the Creation of New Monolayer Assemblies. <i>Langmuir</i> , 6, (1990) 1621-1627	
	5.	PETRI, D.F.S., et al. An improved method for the assembly of amino-terminated monolayers on SiO ₂ and the vapor deposition of gold layers. <i>Langmuir</i> , 15, (1999) 4520-4523	
	6.	INGALL, M.D.K., et al. Surface functionalization and imaging using monolayers and surface-grafted polymer layers. <i>J. Am. Chem. Soc.</i> , 121, (1999) 3607-3613	
	7.	KATZENDLER, J., et al. The effect of spacer, linkage and solid support on the synthesis of oligonucleotides. <i>Tetrahedron</i> , 45, (1989) 2777-2792	
	8.	TEMSAMANI, J., et al. Sequence identity of the n -1 product of a synthetic oligonucleotide. <i>Nucleic Acids Res.</i> , 23, (1995) 1841- 1844	
	9.	FEARON, K.L., et al. Investigation of the 'n -l' impurity in phosphorothioate oligodeoxynucleotides synthesized by the solid-phase ~-cyanoethyl phosphoramidite method using stepwise sulfurization. <i>Nucleic Acids Res.</i> , 23, (1995) 2754-2761	
	10.	IYER, R.P., et al. Improved procedure for the reduction of N-I content in synthetic oligonucleotides. <i>Nucl. Nucl.</i> , 14, (1995) 1349-1357	

Examiner Signature	/Patrick Lewis/ (10/13/2009)	Date Considered	
--------------------	------------------------------	-----------------	--

EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional.). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/13/2009)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> Sheet <u>3</u> of <u>5</u>	Complete If Known	
	Application Number	10/553,328
	Filing Date	Unknown
	First Named Inventor	Xiaolian Gao
	Art Unit	1623
	Examiner Name	
	Attorney Docket Number	123029-1057 (UHID 2003-031)

11.	MASKOS, U. et al. Oligonucleotide hybridization on glass supports: a novel linker for oligonucleotide synthesis and hybridization of oligonucleotides in situ. <i>Nucleic Acids Res.</i> , 20, (1992) 1679-1684	
12.	GRAY, D.E., et al. Ellipsometric and interferometric characterization of DNA probes immobilized on a combinatorial array. <i>Langmuir</i> , 13, (1997) 2833-2842	
13.	SHCHEPINOV, M.S., et al. Steric factors influencing hybridization of nucleic acids to oligonucleotide arrays. <i>Nucleic Acids Res.</i> , 25, (1997) 1155-1161	
14.	GUO, Z., et al. Direct fluorescence analysis of genetic polymorphisms by hybridization with oligonucleotide arrays on glass supports. <i>Nucleic Acids Res.</i> , 22, (1994) 5456-5465	
15.	PIRRUNG, M.C. et al. Comparison of methods for photochemical phosphoramidite-based DNA synthesis. <i>J. Org. Chem.</i> , 60, (1995) 6270-6276	
16.	PIRRUNG, M.C. and Fallon, L. Proofing of photolithographic DNA synthesis with 3',5'-dimethoxybenzoinyloxycarbonyl-protected deoxynucleoside phosphoramidites. <i>J. Org. Chem.</i> , 63, (1998) 241-246	
17.	PEASE, A.C., et al. Light-generated oligonucleotide arrays for rapid DNA sequence analysis. <i>Proc. Natl Acad. Sci. USA</i> , 91, (1994) 5022-5026	
18.	MCGALL, G.H., et al. Light-directed synthesis of high-density oligonucleotide arrays using semiconductor photoresists. <i>Proc. Natl Acad. Sci. USA</i> , 93, (1996) 13555-13560	
19.	BEIER, M. et al. Versatile derivatization of solid support media for covalent bonding on DNA-microchips. <i>Nucleic Acids Res.</i> , 27, (1999) 1970-1977	

Examiner Signature	/Patrick Lewis/ (10/13/2009)	Date Considered	
--------------------	------------------------------	-----------------	--

EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/13/2009)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> Sheet <u>4</u> of <u>5</u>	Complete If Known	
	Application Number	10/553,328
	Filing Date	Unknown
	First Named Inventor	Xiaolian Gao
	Art Unit	1623
	Examiner Name	
	Attorney Docket Number	123029-1057 (UHID 2003-031)

20.	Yu, D., et al. Diethoxy N, N-diisopropylphosphoramidite as an improved capping reagent in the synthesis of oligonucleotides using phosphoramidite chemistry. <i>Tetrahedron Letters</i> 35, (1994) 8565-8568	
21.	LEPROUST, E., et al. Characterization of oligodeoxyribonucleotide synthesis on glass plates. <i>Nucleic Acids Res.</i> , 29, (2001) 2171-2180	
22.	ECKSTEIN, F. (ed.) Oligonucleotides and Analogues, A Practical Approach. IRL Press, Oxford, UK, (1991) 109-135	
23.	FIELDS, G.B. (ed.) Methods in Enzymology. Academic Press, New York, USA, 289, (2001) Academic Press, New York, USA	
24.	SEARS et al. Toward Automated Synthesis of Oligosaccharides and Glycoproteins. <i>Science</i> 291, (2001) 2344-2350, American Association for the Advancement of Science, Washington, D.C. USA	
25.	HARRIS, J.M. et al. (ed.), Poly(Ethylene Glycol) ACS Symposium Series No. 680 (1997) American Chemical Society, Washington, D.C. USA	
26.	ARAKAWA, T. et al. Mechanism of Poly(ethylene glycol) Interaction with Proteins, <i>Biochemistry</i> 24, (1985) 6756-6762, American Chemical Society, Washington, D.C., USA	
27.	ZHU, X-Y., et al. Grafting of High-Density Poly(ethylene glycol) Monolayers on Si(111), <i>Langmuir</i> 17 (2001) 7798-7803, American Chemical Society, Washington, D.C., USA	
28.	KNOLL, E. et al., Unimolecular Beacons for the Detection of DNA-Binding Proteins. <i>Anal. Chem.</i> (2004) 76, 1156-1164, American Chemical Society, Washington, D.C., USA	

Examiner Signature	/Patrick Lewis/ (10/13/2009)	Date Considered	
--------------------	------------------------------	-----------------	--

EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional.). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/13/2009)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for 1449/PTO <div style="text-align: center; font-weight: bold; font-size: 1.2em;"> INFORMATION DISCLOSURE STATEMENT BY APPLICANT </div> <div style="text-align: center; font-style: italic;"> (Use as many sheets as necessary) </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; font-weight: normal; font-style: italic;">Complete If Known</th> </tr> <tr> <td style="width: 50%;">Application Number</td> <td>10/553,328</td> </tr> <tr> <td>Filing Date</td> <td>Unknown</td> </tr> <tr> <td>First Named Inventor</td> <td>Xiaolian Gao</td> </tr> <tr> <td>Art Unit</td> <td>1623</td> </tr> <tr> <td>Examiner Name</td> <td></td> </tr> <tr> <td>Attorney Docket Number</td> <td>123029-1057 (UHID 2003-031)</td> </tr> </table>	Complete If Known		Application Number	10/553,328	Filing Date	Unknown	First Named Inventor	Xiaolian Gao	Art Unit	1623	Examiner Name		Attorney Docket Number	123029-1057 (UHID 2003-031)
Complete If Known															
Application Number	10/553,328														
Filing Date	Unknown														
First Named Inventor	Xiaolian Gao														
Art Unit	1623														
Examiner Name															
Attorney Docket Number	123029-1057 (UHID 2003-031)														

[illegible]

Examiner Signature	/Patrick Lewis/ (10/13/2009)	Date Considered	
-----------------------	------------------------------	--------------------	--

EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/13/2009)